

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A milking plant for milking animals, comprising:
milk collecting means, attachable to teats of said animals;
a vacuum supply system, ~~milk storage means,~~ connected to said milk collecting means,
and used for withdrawing milk from said teats;
a milk line system connected to the collecting means ~~and;~~
milk storage means, connectable to the ~~milk storage means~~ line system by;
milk storage valve means, that is selectively adjustable to prevent fluid communication
between said milk line system and said milk storage means during cleaning of the milk line
system, said milk storage valve means characterised by;
pressure regulating means, capable of arranging a lower fluid pressure in the milk line
system than in the milk storage means, when said ~~first~~ milk storage valve means are closed.
2. (currently amended) The milking plant as recited by claim 1, further comprising cleaning
means having a cleaning fluid supply, a cleaning fluid washer, a cleaning fluid return pump, and
a cleaning fluid supply line system; connected to the milk line system and to the cleaning fluid
supply, the cleaning fluid supply line system selectively capable of fluid communication
therewith through cleaning fluid valve means, and connectable to the milk collecting means,
thereby obtaining a closed fluid communicating loop.
3. (original) The milking plant as recited in claim 2, further comprising an air separator
with an intake connected to the cleaning fluid supply line system for return flow of cleaning fluid
from the milk line system, an air outlet selectively connected to the vacuum supply system, and
an output connected to the cleaning fluid pump.

4. (original) The milking plant as recited in claim 3, wherein said air separator further comprises a cleaning fluid drainage valve.
5. (previously presented) The milking plant as recited in claim 4, wherein said cleaning fluid return pump has an output connected to a non-return valve, preventing fluid flow back into said cleaning fluid return pump.
6. (previously presented) The milking plant as recited in claim 5, wherein the cleaning fluid return pump is a centrifugal pump comprising an impeller connected to the air separator with the center of said impeller located immediately against said output of the air separator.
7. (previously presented) The milking plant as recited in claim 6, wherein said milk storage means comprises a milk cooling tank.
8. (original) A method for cleaning of a milking plant for milking animals, the milk plant comprising milk collecting means, attachable to teats of said animals, a milk storage means, a milk line system connected to the collecting means and connectable to the milk storage means by milk storage valve means, selectively adjustable to prevent fluid communication between said milk line system and said milk storage means during cleaning of the milk line system, characterized by the steps of
 - closing said milk storage valve means;
 - arranging a cleaning fluid circulation loop by connecting said milk collecting means and said milk line system to a cleaning fluid supply, and
 - arranging a lower fluid pressure in the cleaning fluid circulation loop than in the milk storage means.

9. (original) The method as recited in claim 8, wherein the steps of arranging a lower fluid pressure in the cleaning fluid circulation loop is obtained by connecting it to said vacuum supply system.

10. (currently amended) A milking plant used to collect milk from an animal comprising:
a milk collector that receives milk from the animal;
a tank;
a milk conduit leading from the milk collector to the tank;
a cleaning fluid supply;
a cleaning fluid conduit connected to the milk conduit;
a valving arrangement connected to the milk conduit and the cleaning fluid conduit and
having one setting that enables milk to flow from the milk collector through the milk conduit and
another setting that allows cleaning fluid from the cleaning fluid supply to flow through the milk
conduit;
a vacuum supply connected to the valving arrangement that applies a vacuum to the
cleaning fluid conduit to prevent cleaning fluid in the cleaning fluid conduit from entering the
milk conduit when the valving arrangement is set to enable milk to flow through the milk
conduit.

11. (previously presented) The milking plant as recited in claim 10 wherein the milk collector comprises a milking station having a plurality of teat cups, the tank comprises a milk cooling tank, the milk conduit comprises a transport line through which milk can flow, the valving arrangement comprises a plurality of valves with one of the valves disposed in a closed position and another one of the valves disposed in an open position permitting flow of milk from the milking station to the milk cooling tank, and the one of the valves disposed in an open position and the another one of the valves disposed in a closed position permitting flow of cleaning solution through the transport line, and the vacuum supply comprises a milking vacuum system.

12. (currently amended) The milking plant as recited in claim 11 further comprising a cleaning solution supply connected to the plurality of teat cups, wherein cleaning ~~fluid~~ solution from the supply is introduced through the plurality of teat cups into the transport line to clean the transport line.

13. (previously presented) The milking plant as recited in claim 12 wherein the cleaning solution comprises a detergent.

14. (previously presented) The milking plant as recited in claim 10 further comprising a pump that draws cleaning solution out of the milk conduit.

15. (previously presented) The milking plant as recited in claim 14 further comprising an air separator disposed upstream of the pump and downstream of the milk conduit.

16. (previously presented) The milking plant as recited in claim 15 wherein the pump comprises a centrifugal pump and the vacuum supply applies the vacuum to the air separator.

17. (previously presented) The milking plant as recited in claim 15 further comprising a second pump disposed downstream of the air separator with one of the pumps comprising a milk pump that pumps milk from the air separator to the milk cooling tank and the other one of the pumps comprising a milk dump pump.

18. (previously presented) The milking plant as recited in claim 10 further comprising a separator in communication with the cleaning fluid conduit, wherein the milk collector comprises a milking station having a plurality of teat cups, the tank comprises a milk cooling tank, the milk conduit comprises a transport line through which milk can flow, the valving arrangement comprises a plurality of valves with one of the valves disposed in a closed position and another one of the valves disposed in an open position permitting flow of milk from the

milking station through the milk conduit to the milk cooling tank, and the one of the valves disposed in an open position and the another one of the valves disposed in a closed position permitting flow of cleaning solution through the tank and into the cleaning fluid conduit, and the vacuum supply line comprises a milking vacuum system that is connected to the separator.

19. (previously presented) The milking plant as recited in claim 18 further comprising a second tank that holds milk when cleaning solution is introduced in the milk cooling tank and wherein the separator comprises an air separator.

20. (new) A milking plant for milking animals, comprising:
a milk collector that is attachable to teats of a milking animal;
a vacuum supply system connected to said milk collector that provides a vacuum which facilitates withdrawal of milk from said teats;
a milk line system connected to the milk collector; and
a milk storage tank that is connected to the milk line system;
a milk storage valve that is selectively adjustable to prevent fluid communication between said milk line system and said milk storage tank during cleaning of the milk line system;
and
a pressure regulator capable of producing a lower fluid pressure in the milk line system than in the milk storage tank when said milk storage valve is closed.

21. (new) A milking plant for milking animals, comprising:
- a milk collector that is attachable to teats of a milking animal;
 - a vacuum supply system connected to said milk collector that provides a vacuum which facilitates withdrawal of milk from said teats;
 - a milk line system connected to the milk collector; and
 - a milk storage tank that is connected to the milk line system;
 - a milk storage valve that is selectively adjustable to prevent fluid communication between said milk line system and said milk storage tank during cleaning of the milk line system;
 - a pressure regulator capable of producing a lower fluid pressure in the milk line system than in the milk storage tank when said milk storage valve is closed; and
 - a cleaning arrangement that includes a cleaning fluid supply, a cleaning fluid washer, a cleaning fluid return pump, and a cleaning fluid supply line system that is connected to said milk line system and to said cleaning fluid supply.
22. (new) The milking plant as recited in claim 21 further comprising a cleaning valve, wherein the cleaning fluid supply line system is selectively capable of fluid communication with said cleaning arrangement through said cleaning fluid valve, and which is connectable to said milk collector, thereby providing a closed fluid communicating loop.

23. (new) A milking plant for milking animals, comprising:
- a milk collector that is attachable to teats of a milking animal;
 - a vacuum supply system connected to said milk collector that provides a vacuum which facilitates withdrawal of milk from said teats;
 - a milk line system connected to the milk collector;
 - a milk storage tank that is connected to the milk line system;
 - a milk storage valve that is selectively adjustable to prevent fluid communication between said milk line system and said milk storage tank during cleaning of the milk line system;
 - a pressure regulator capable of producing a lower fluid pressure in the milk line system than in the milk storage tank when said milk storage valve is closed;
 - a cleaning arrangement that includes a cleaning fluid supply, a cleaning fluid washer, a cleaning fluid return, and a cleaning fluid supply line system that is connected to said milk line system and to said cleaning fluid supply; and
 - an air separator with an intake connected to said cleaning fluid supply line system for return flow of cleaning fluid from the milk line system, an air outlet selectively connected to said vacuum supply system, and an output connected to said cleaning fluid pump.

24. (new) A milking plant for milking animals, comprising:
- a milk collector that is attachable to teats of a milking animal;
 - a vacuum supply system connected to said milk collector that provides a vacuum which facilitates withdrawal of milk from said teats;
 - a milk line system connected to the milk collector;
 - a milk storage tank that is connected to the milk line system;
 - a milk storage valve that is selectively adjustable to prevent fluid communication between said milk line system and said milk storage tank during cleaning of the milk line system;
 - a pressure regulator capable of producing a lower fluid pressure in the milk line system than in the milk storage tank when said milk storage valve is closed;
 - a cleaning arrangement that includes a cleaning fluid supply, a cleaning fluid washer, a cleaning fluid return pump that has an output connected to a non-return valve, and a cleaning fluid supply line system that is connected to said milk line system and to said cleaning fluid supply; and
 - an air separator with an intake connected to said cleaning fluid supply line system for return flow of cleaning fluid from the milk line system, an air outlet selectively connected to said vacuum supply system, an output connected to said cleaning fluid pump, and a cleaning fluid drainage valve.